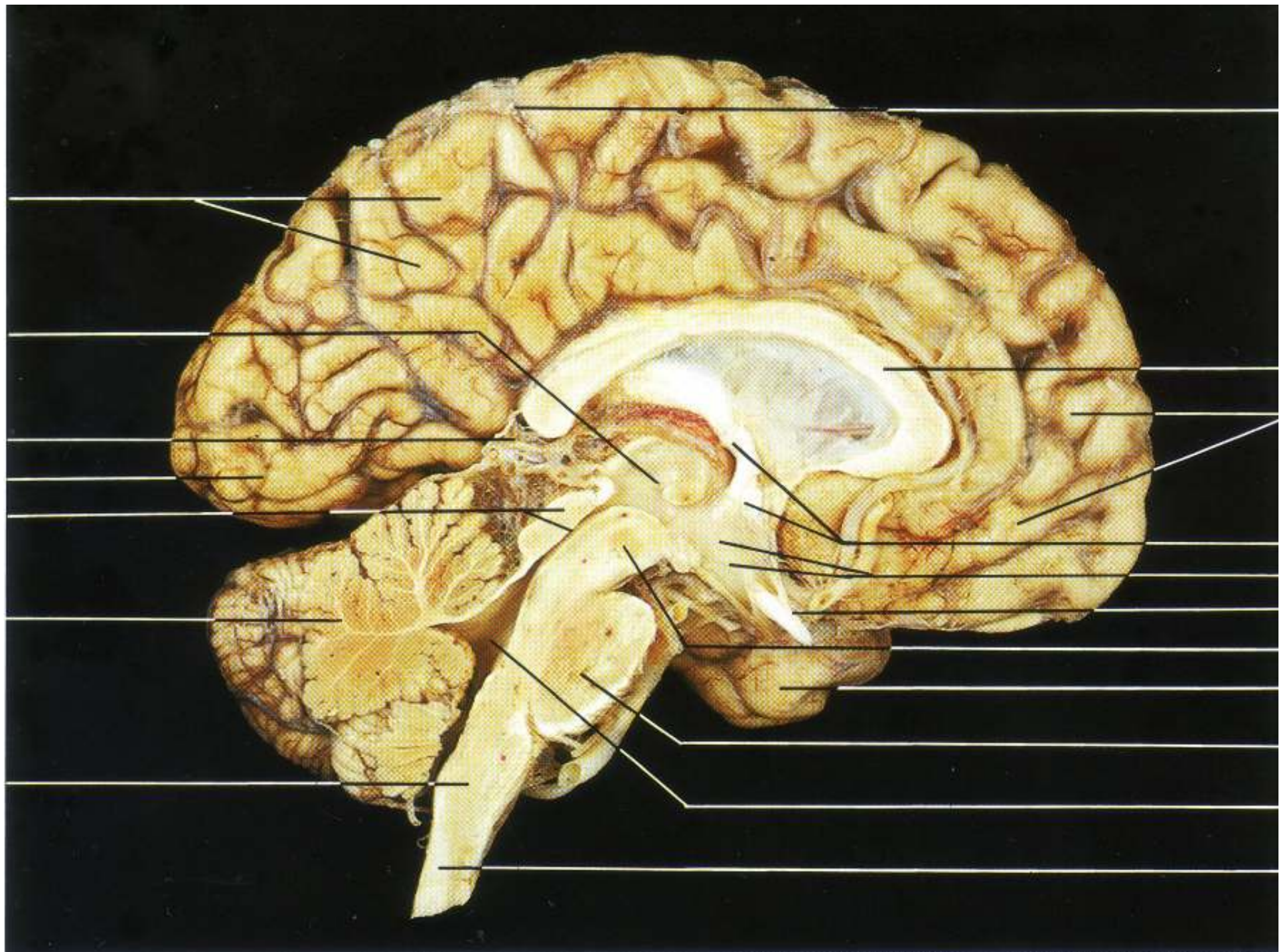


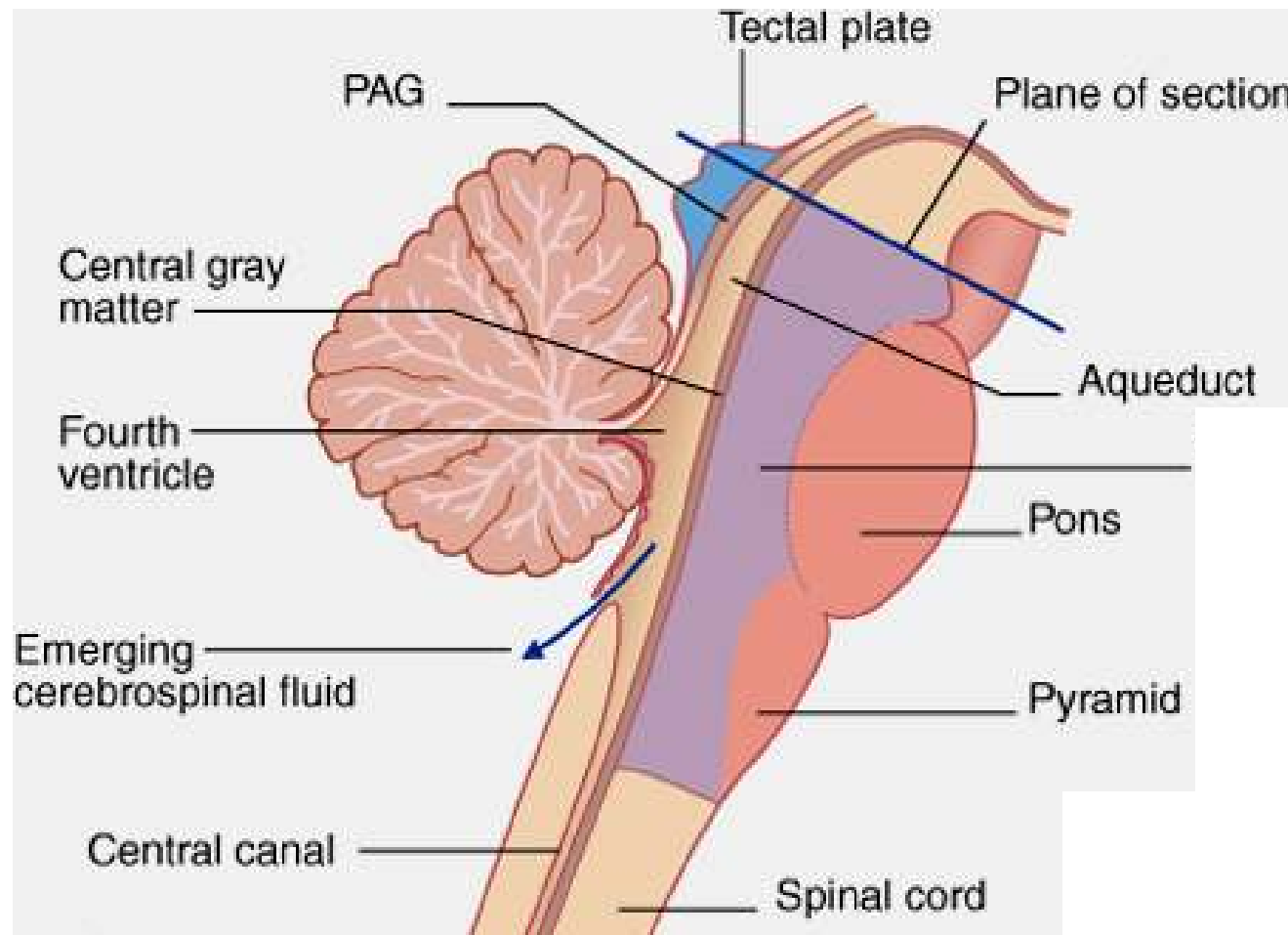
Fourth ventricle

By

Dr. Noura El Tahawy

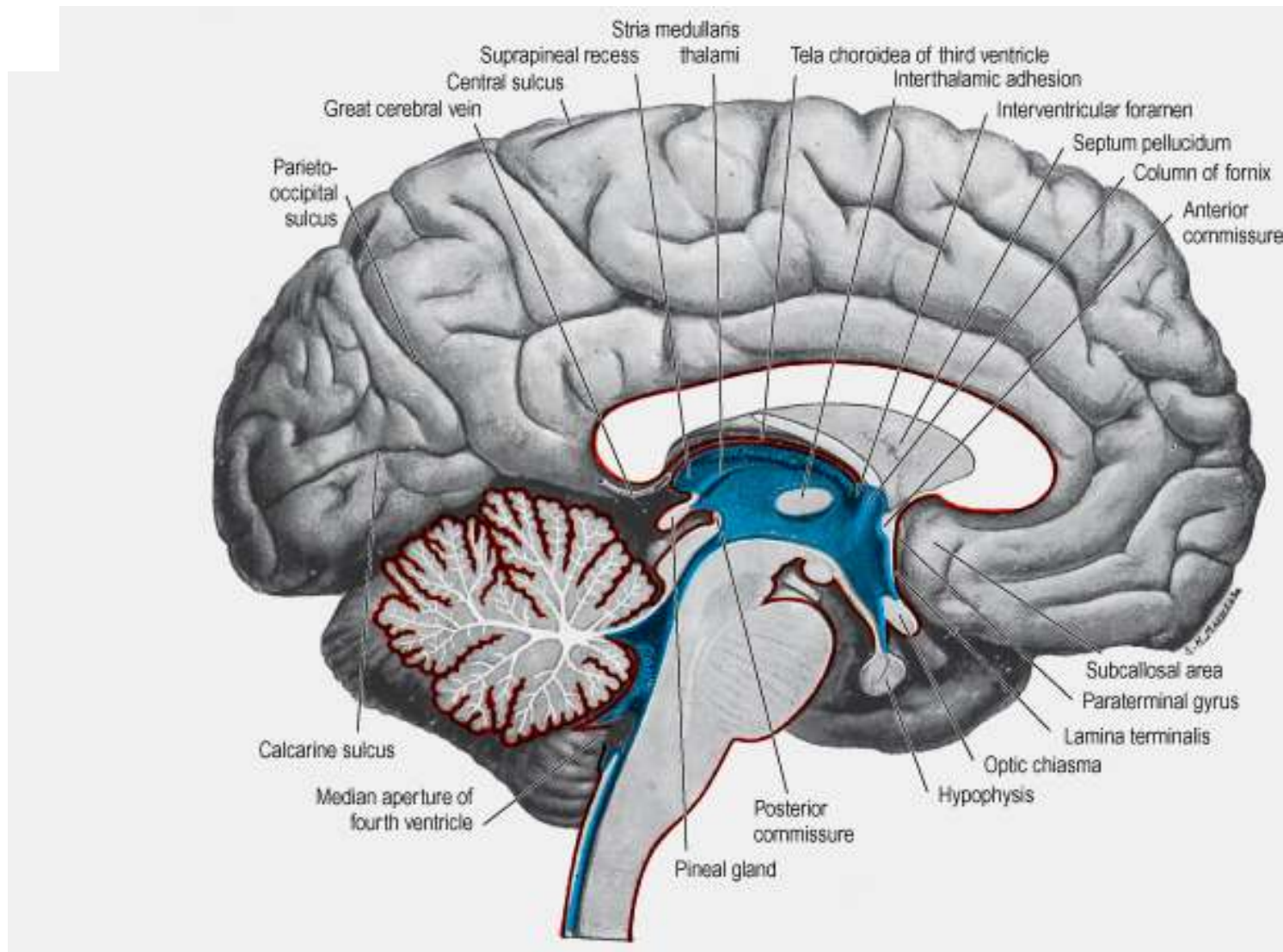


Sagittal section of the brainstem & cerebellum



The diagram showing the position of the fourth ventricle. Cerebrospinal fluid descends along the aqueduct into the fourth ventricle and emerges into the subarachnoid space via three apertures including the median aperture containing the arrow.

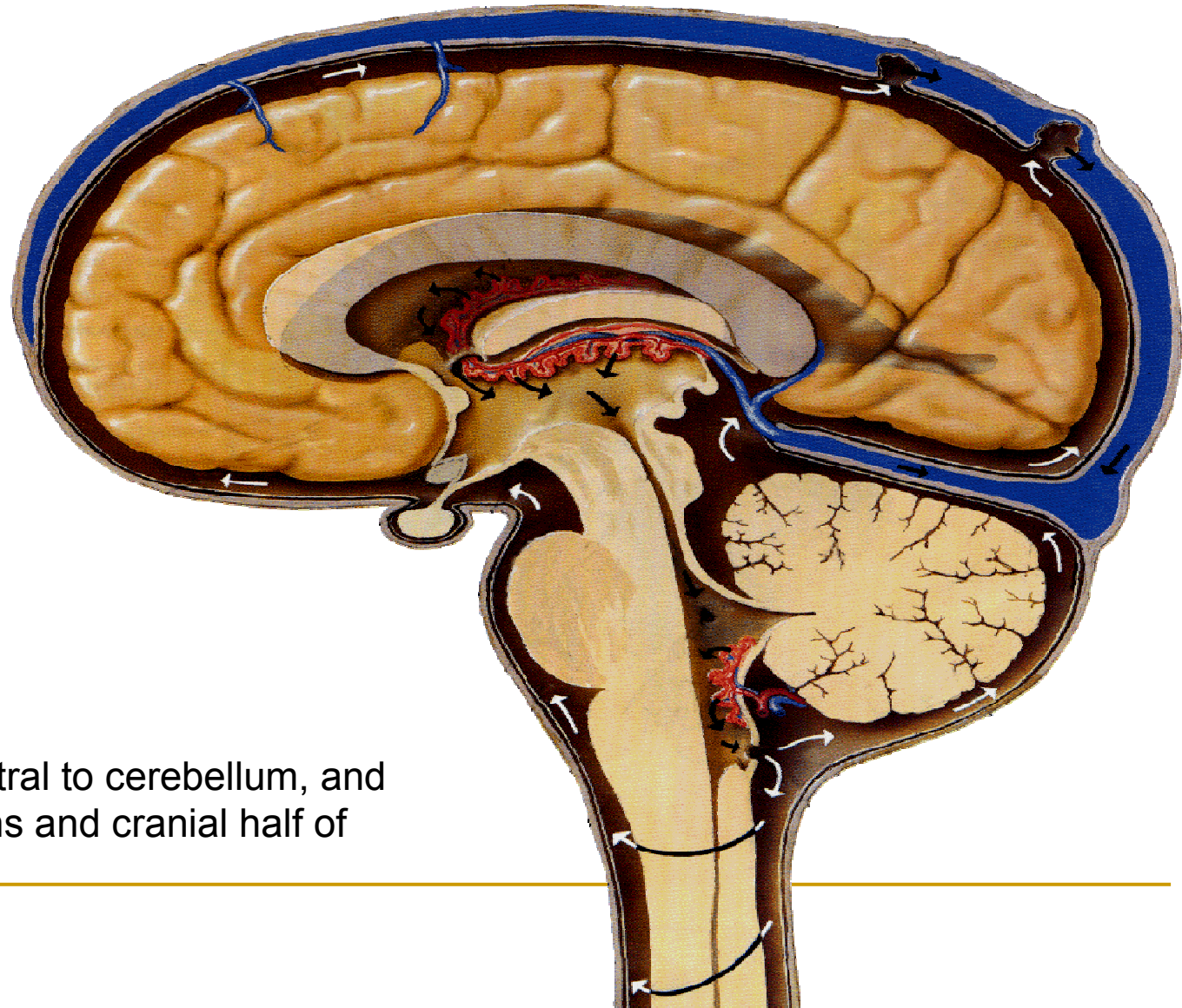
Sagittal hemisection of the brain



Sagittal hemisection of the brain to show the third and fourth ventricles.
Pia mater: red; ependyma: blue.

Fourth ventricle

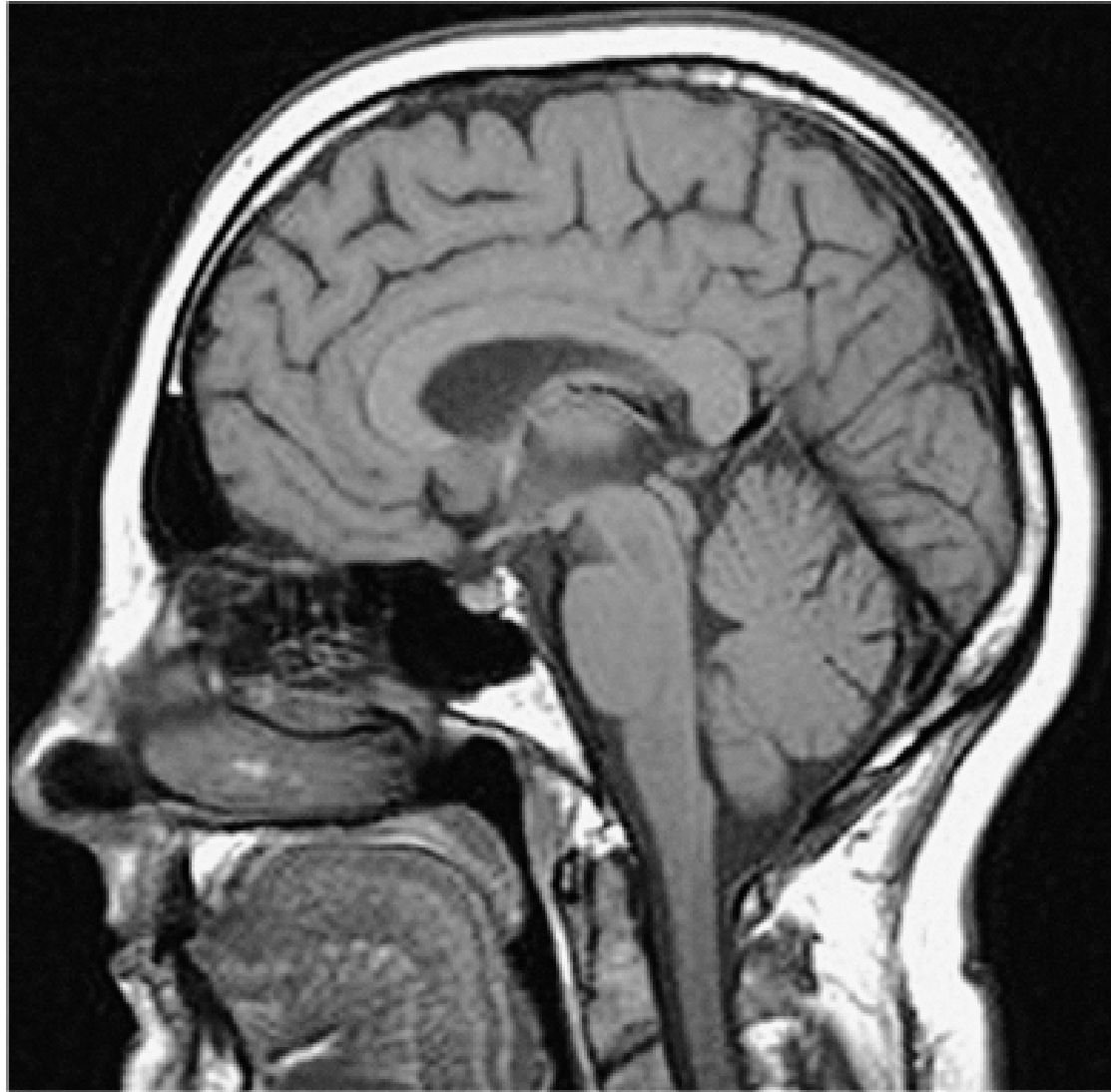
Central canal → fourth ventricle → mesencephalic aqueduct → third ventricle



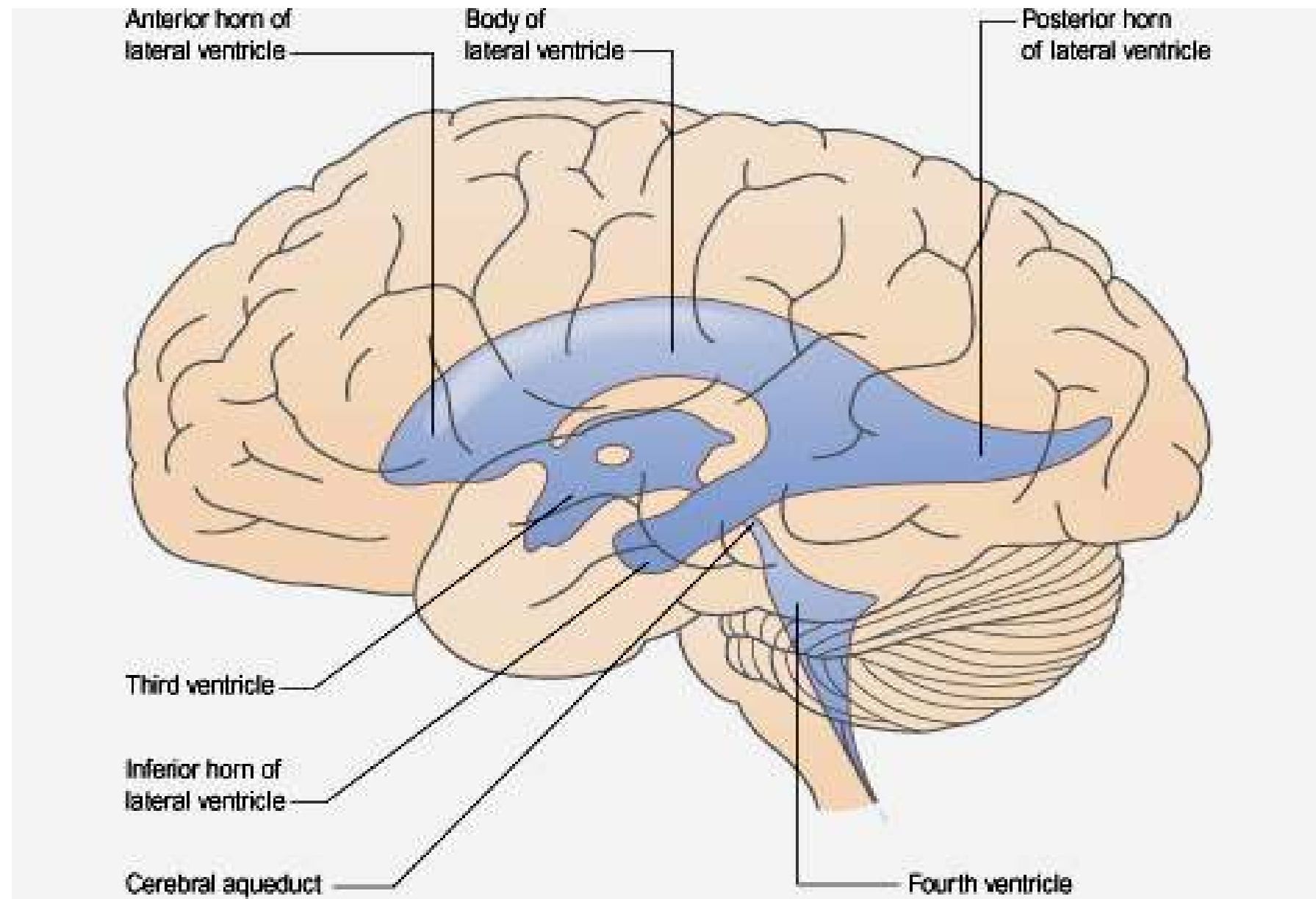
Position

- Situated ventral to cerebellum, and dorsal to pons and cranial half of medulla

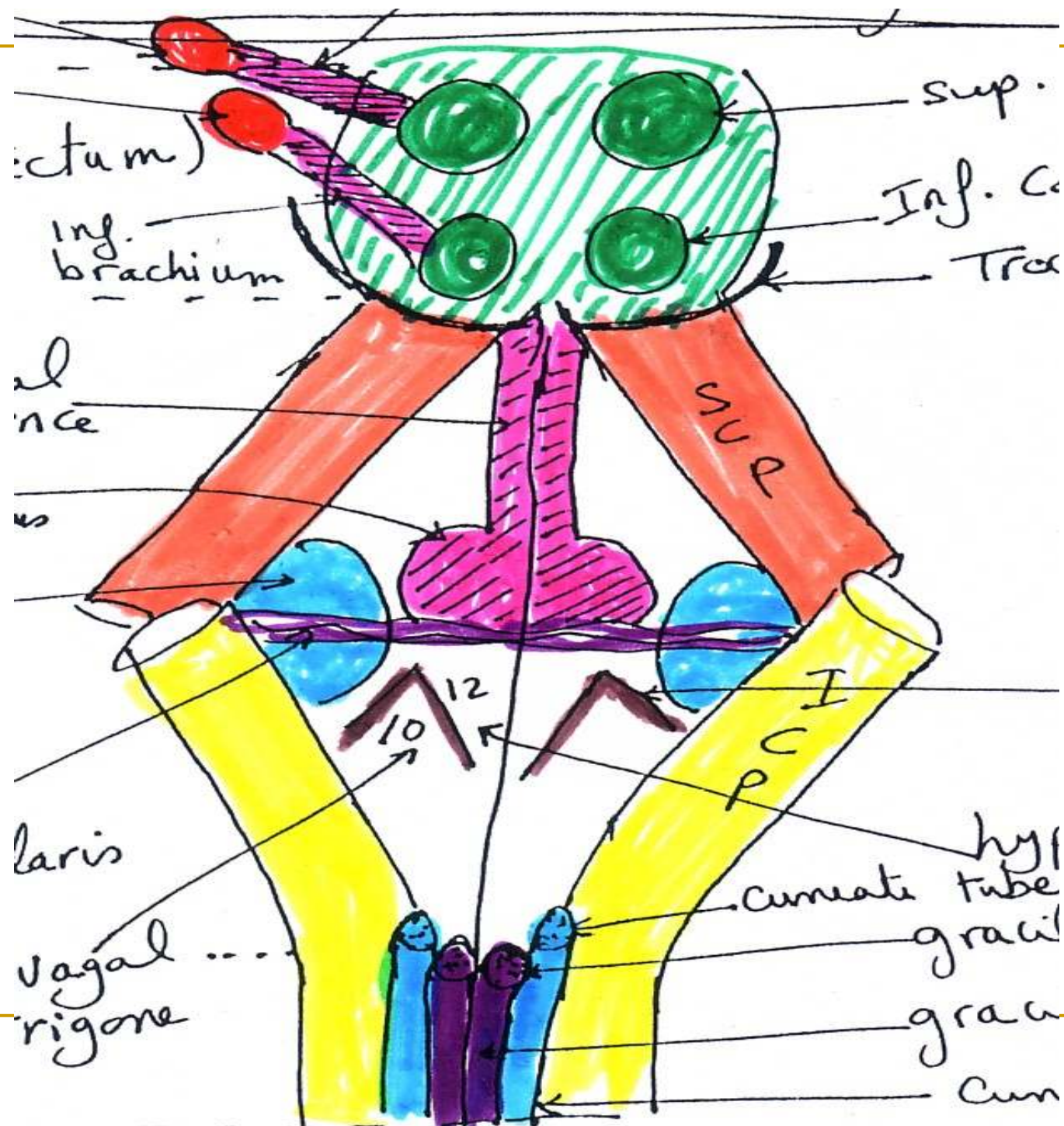
MRI scan of head in sagittal plane.



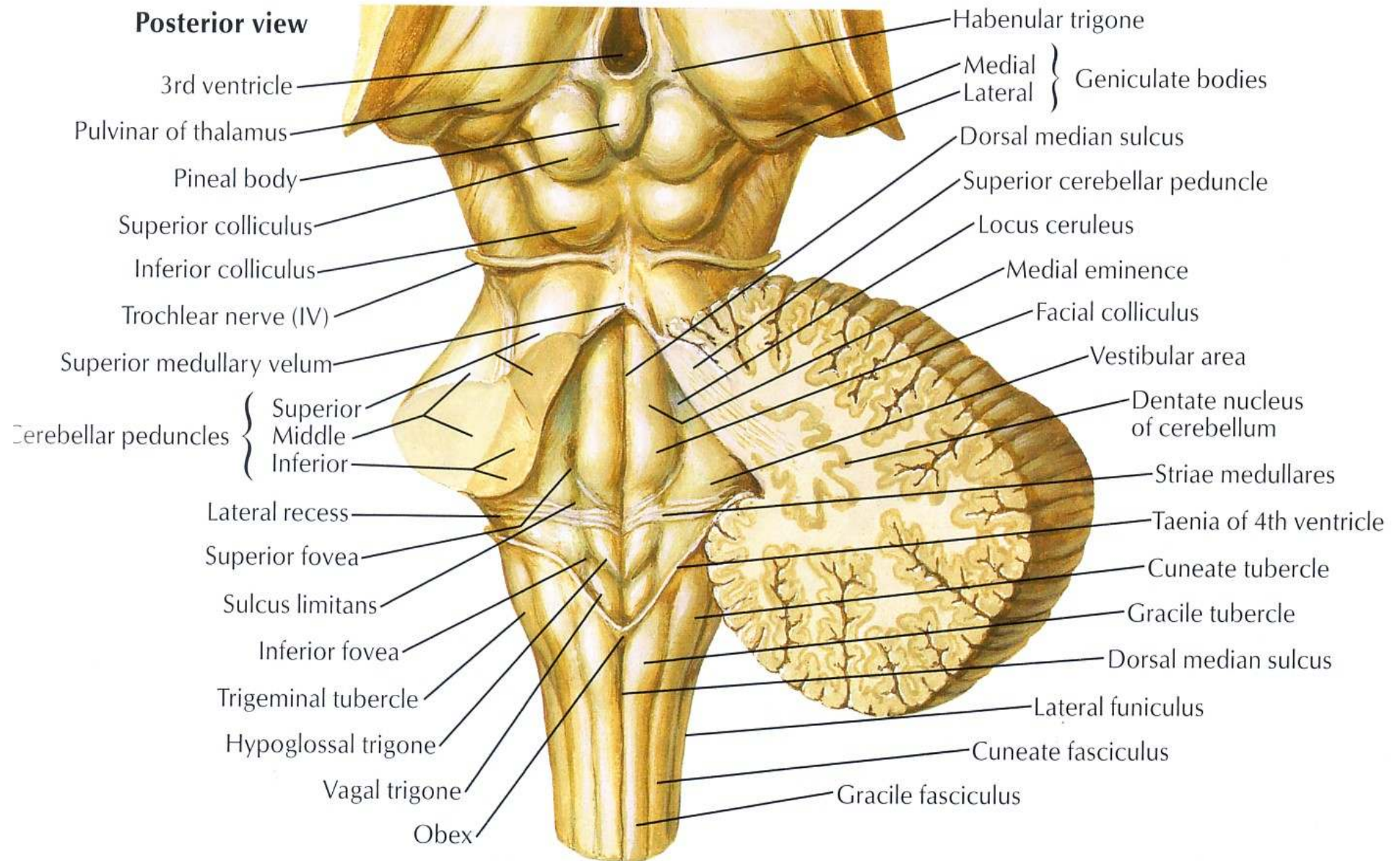
Projection of the ventricles onto the left surface of the brain.



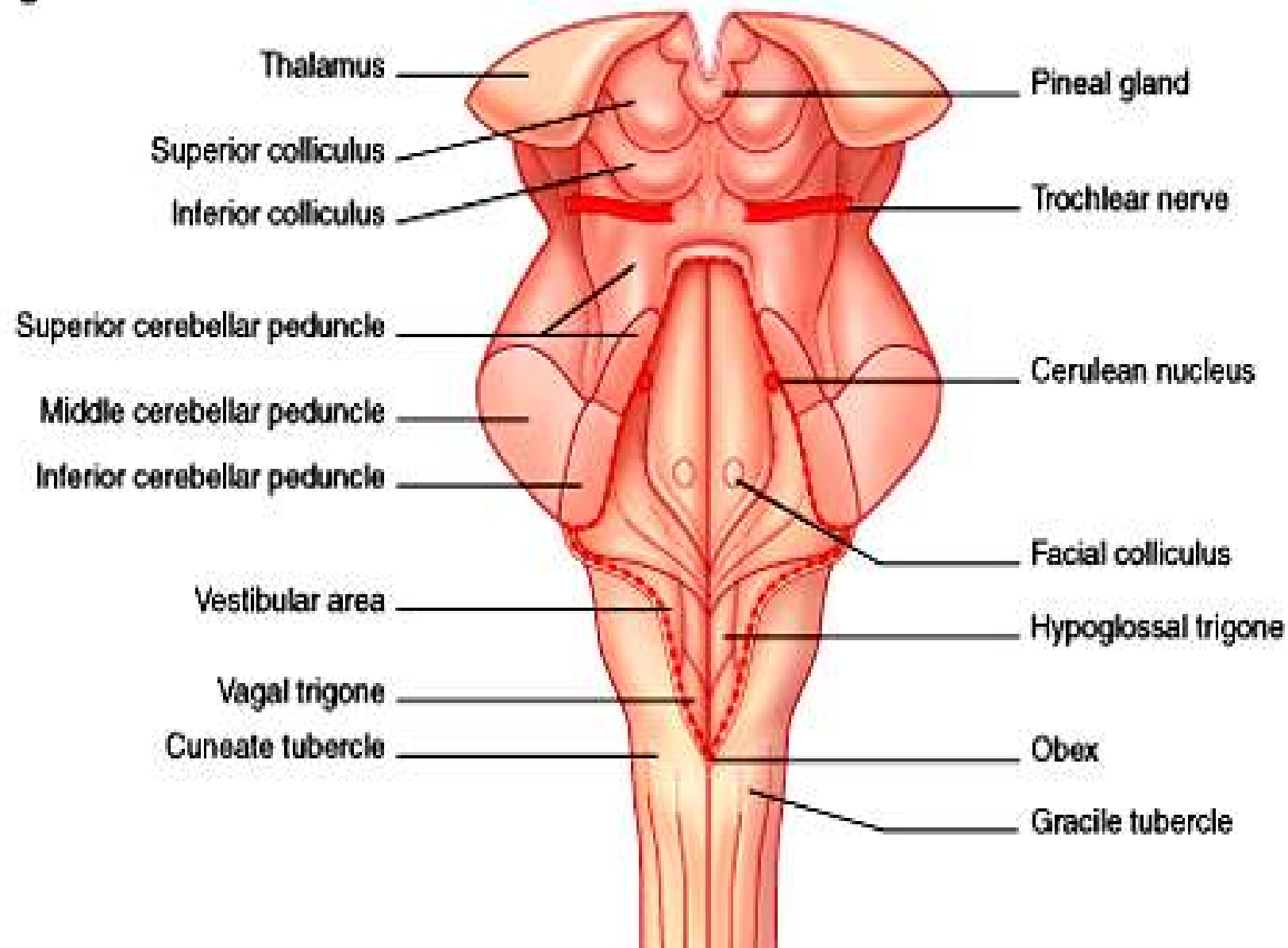
Boundaries & floor of 4th ventricle



Posterior view



Posterior view of the brainstem.

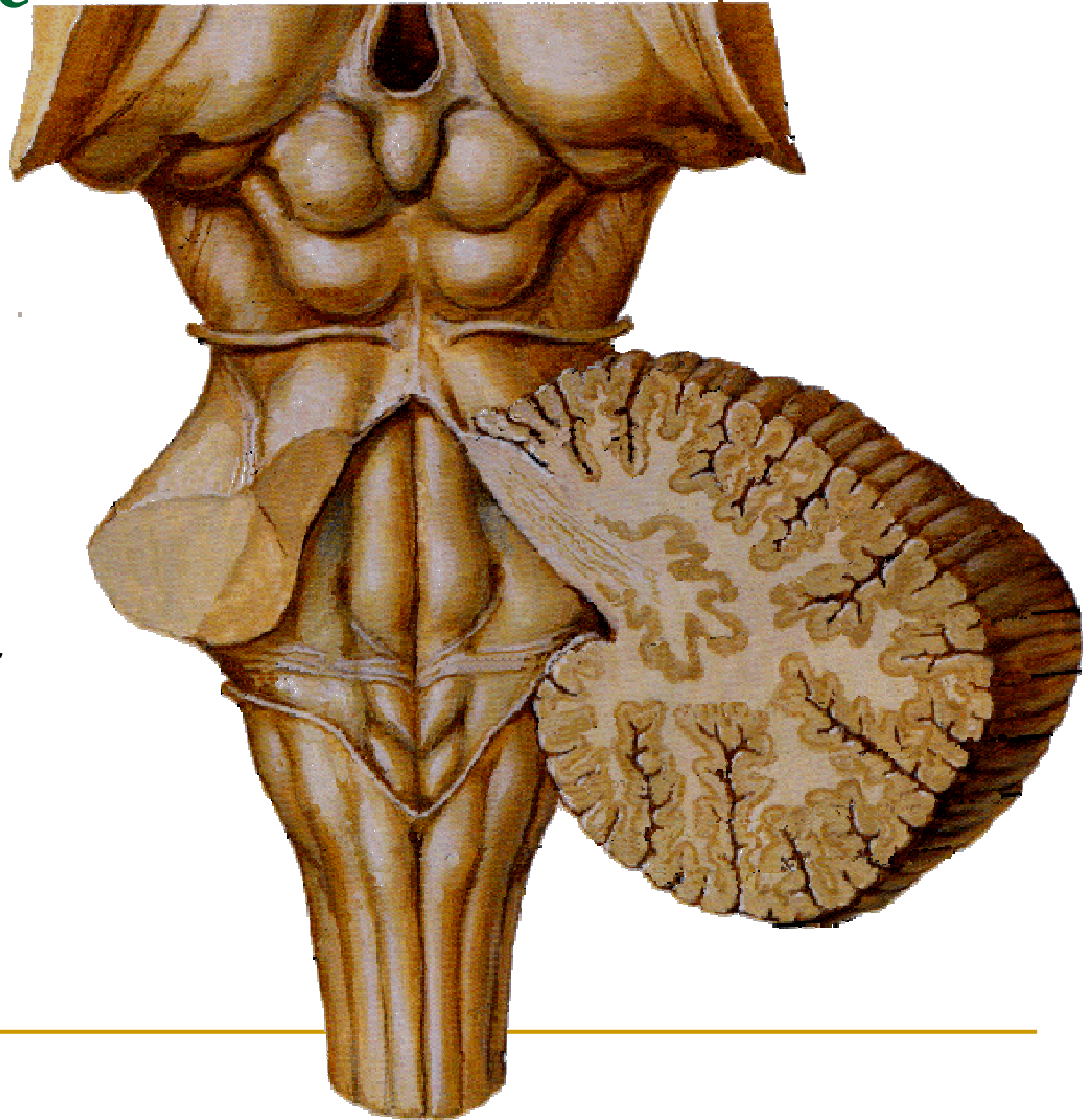


Fourth ventricle

Boundaries

Inferolateral:
gracile and
cuneate tubercles,
inferior cerebellar
peduncles

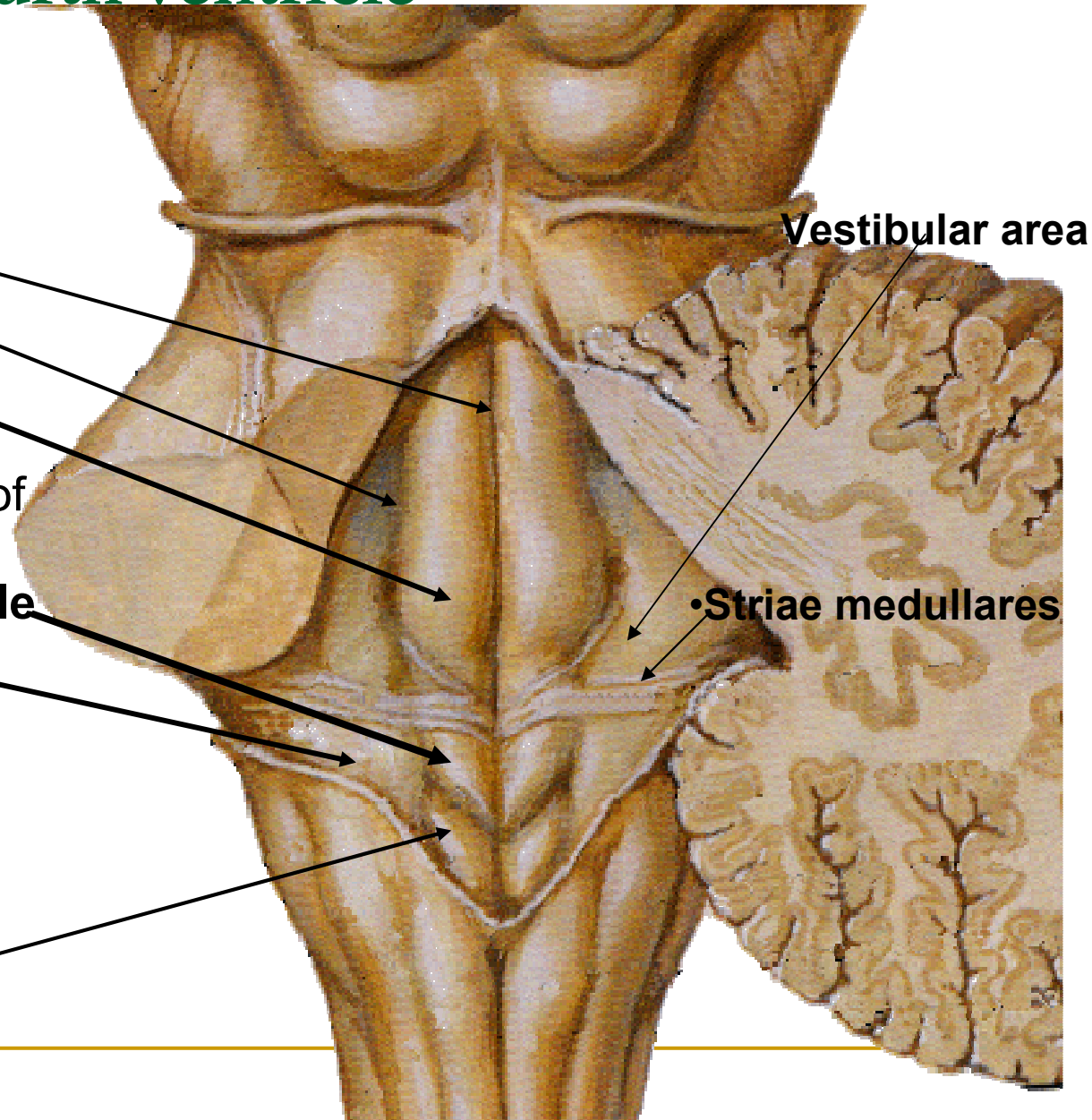
- Superolateral:
superior cerebellar
peduncle
- Lateral recess



Floor of the Fourth ventricle

Pontine part

- Median sulcus
- Sulcus limitans
- **Medial eminence**
 - **Facial colliculus:**
overlies nucleus of abducent n. and genu of facial nerve
 - **Hypoglossal triangle**
- **Vestibular area**
overlies vestibular nuclei
- Acoustic tubercle
overlying dorsal cochlear nucleus
- **Inferior fovea**
(Vagal triangle)



Floor of the Fourth ventricle

Medullary part

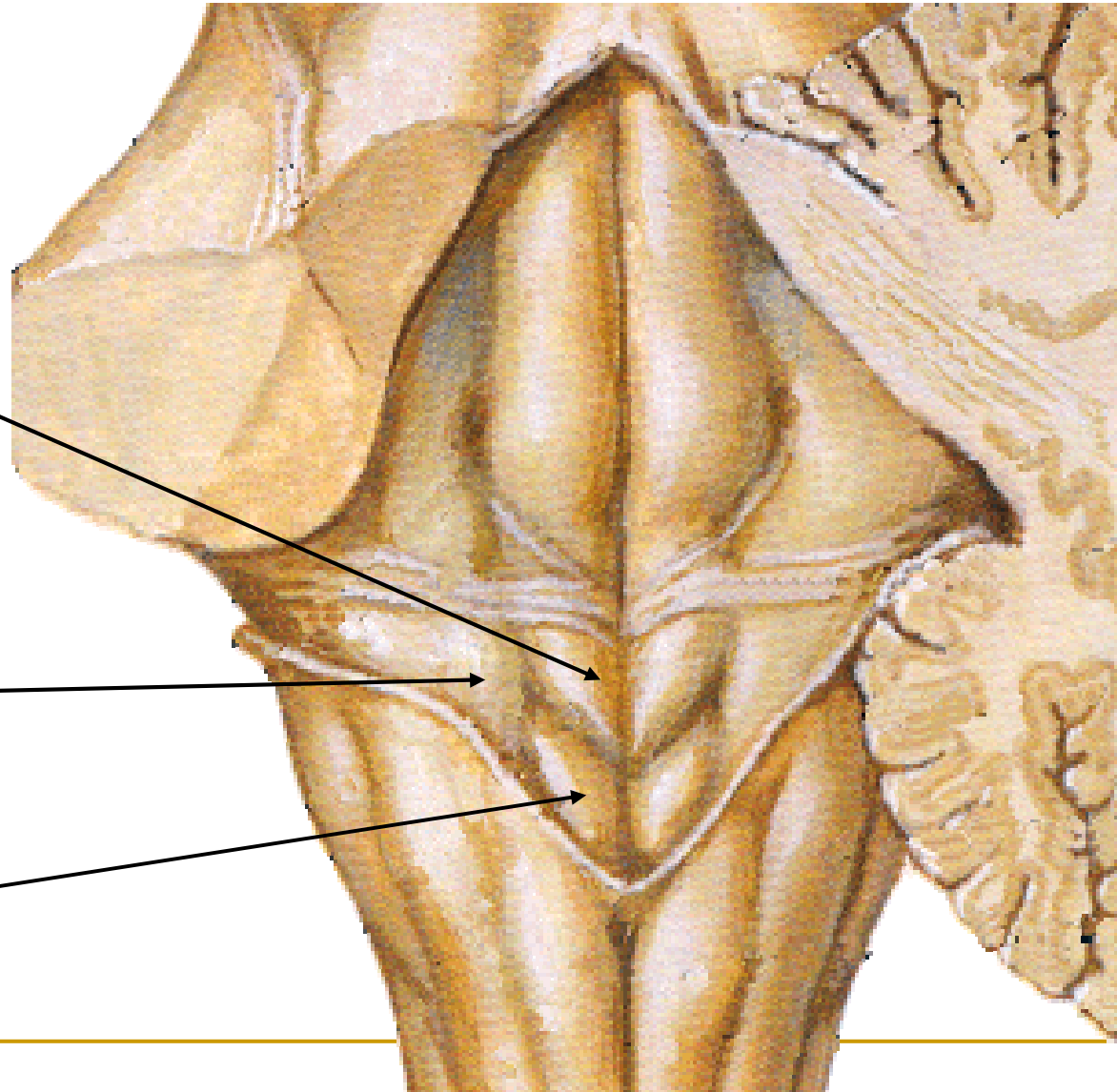
-Inferior fovea

1- Hypoglossal triangle:

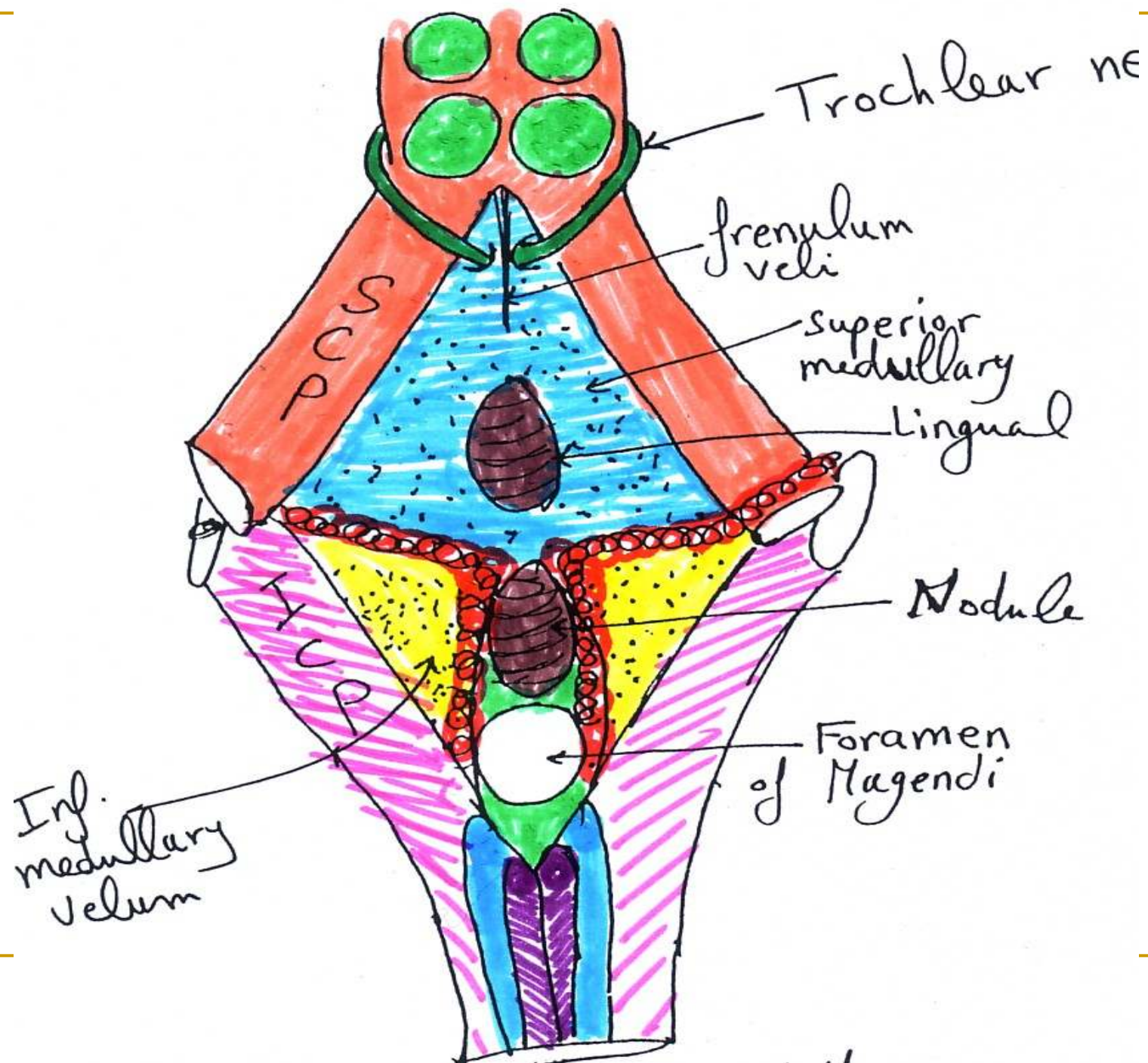
overlying hypoglossal nucleus

2- Vestibular triangle

3- Vagal triangle: overlies dorsal nucleus of vagus nerve



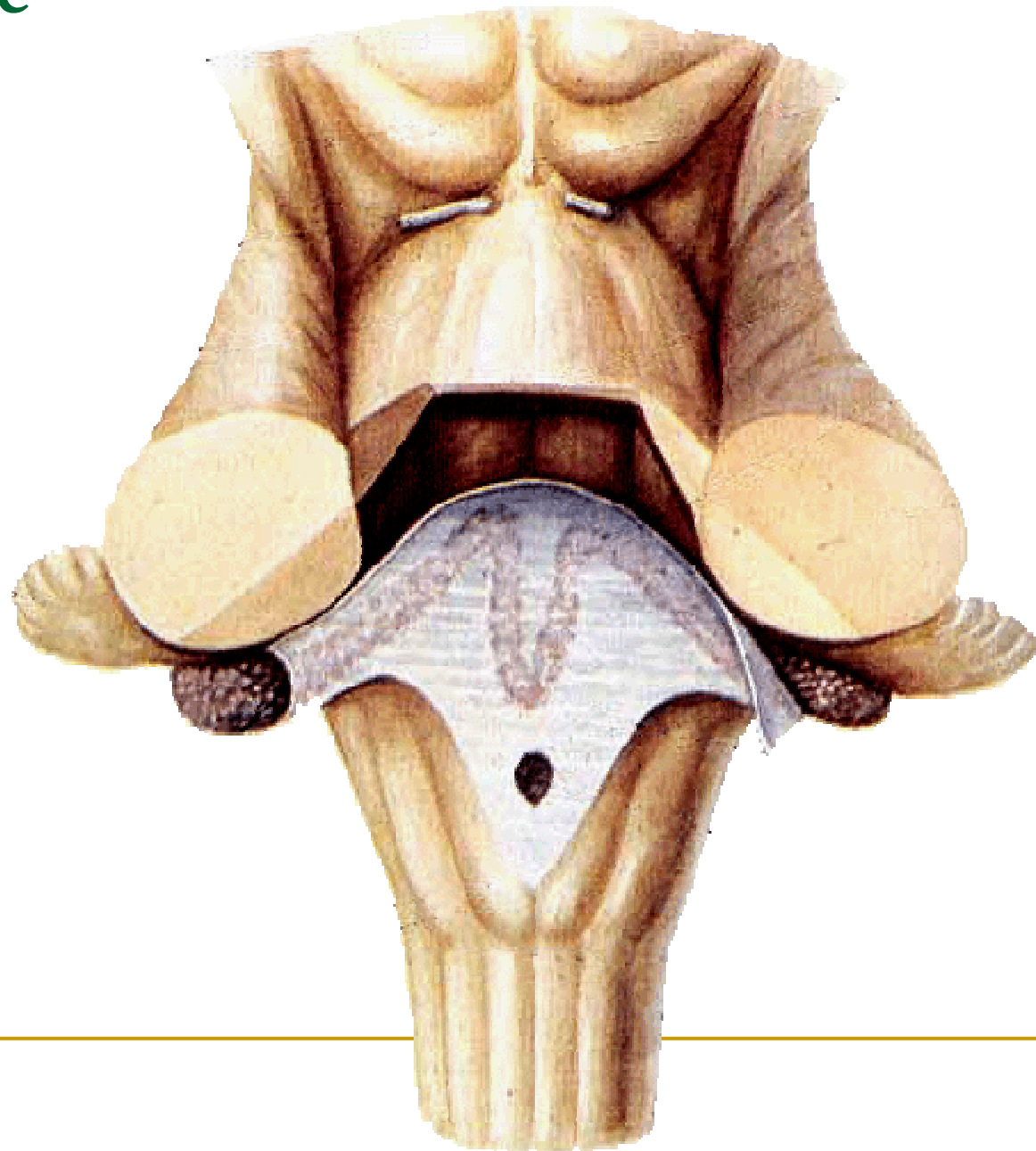
Roof of 4th Ventricle



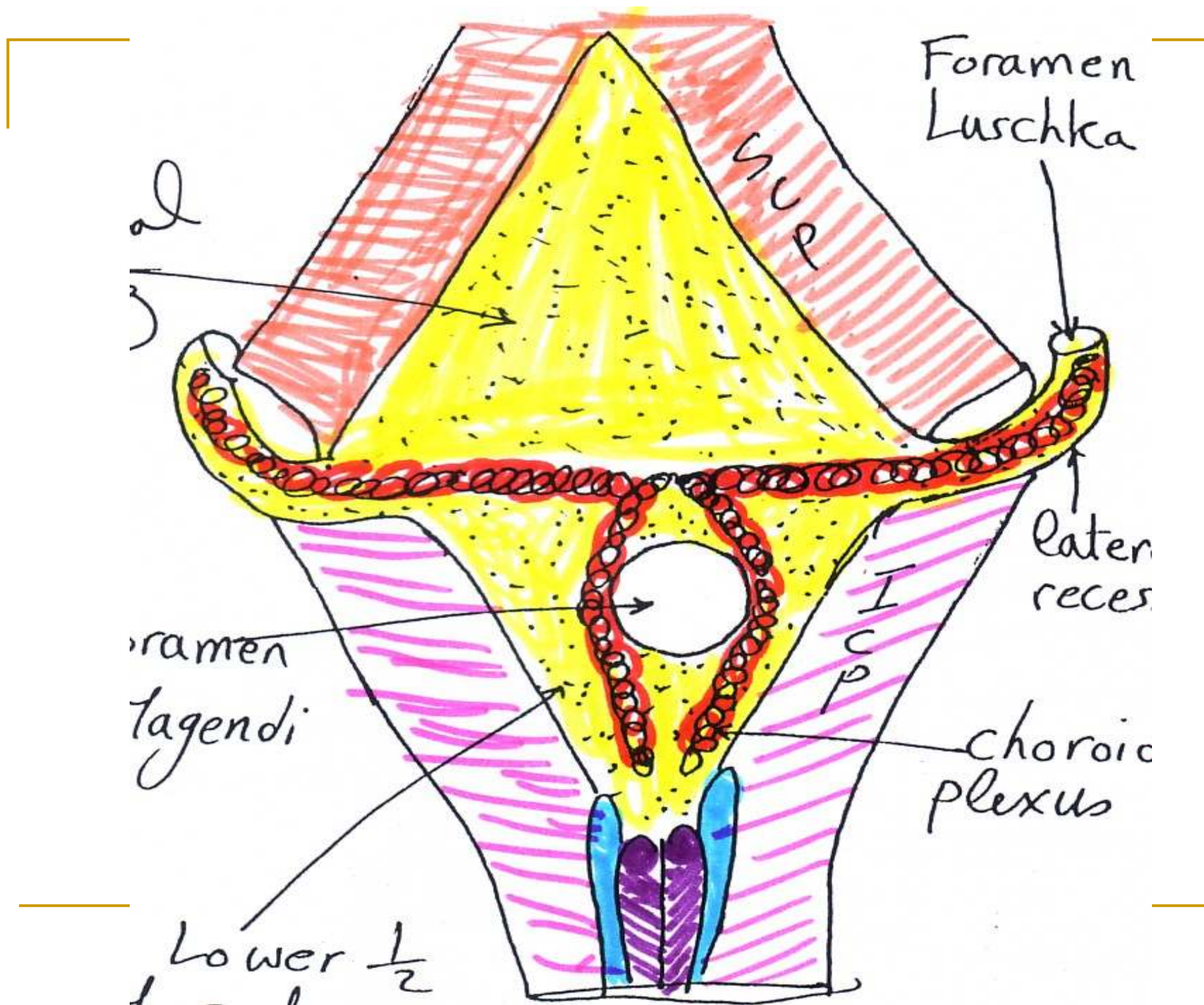
Fourth ventricle

Roof

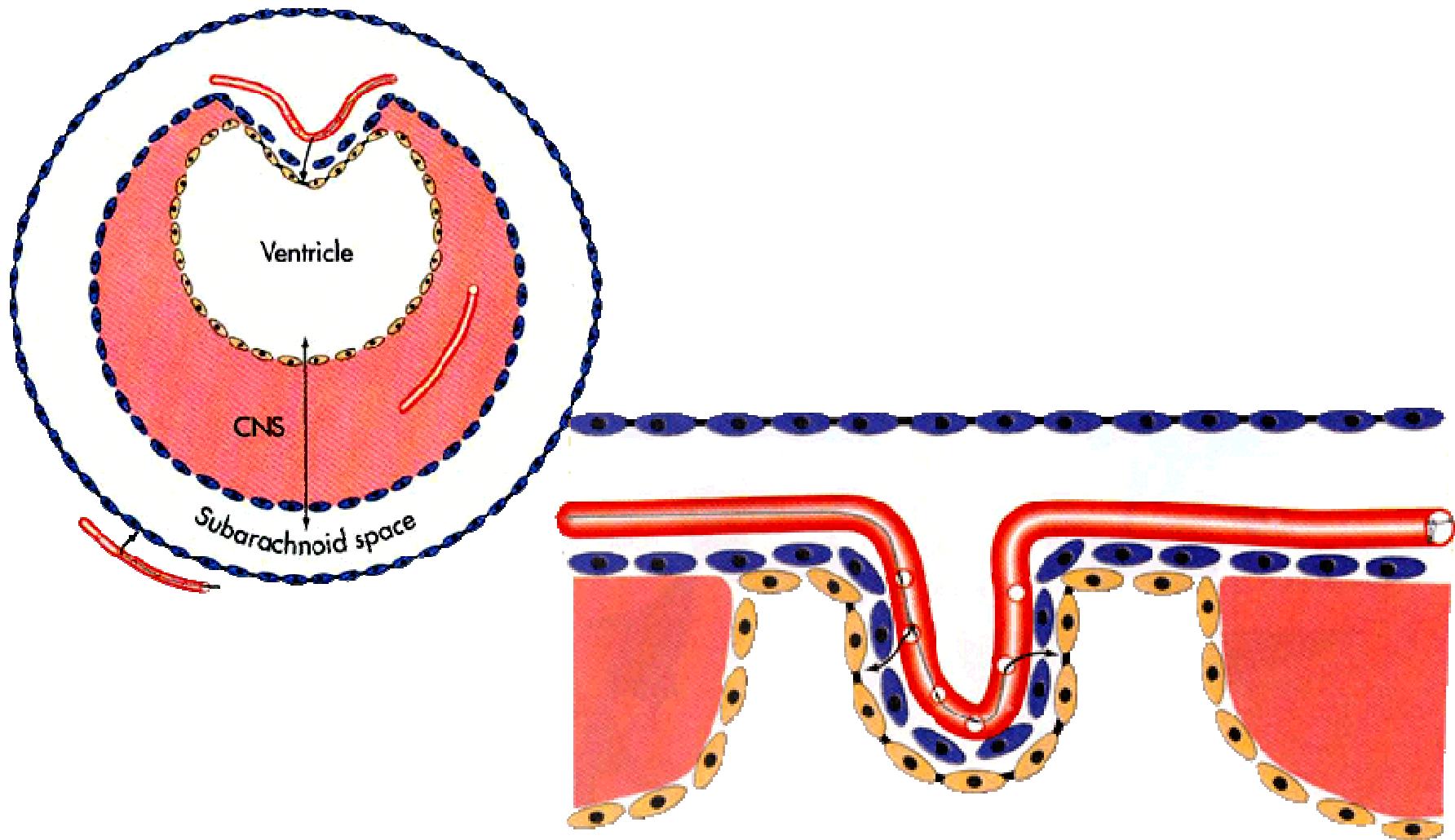
- **Rostral part:**
 - superior cerebellar peduncle and superior medullary velum
- **Caudal part:**
 - inferior medullary velum and choroid plexus of fourth ventricle
- **Three apertures**
 - ❑ Median aperture (F. of Magendi)
 - ❑ Two lateral apertures (foramina of Luschka)



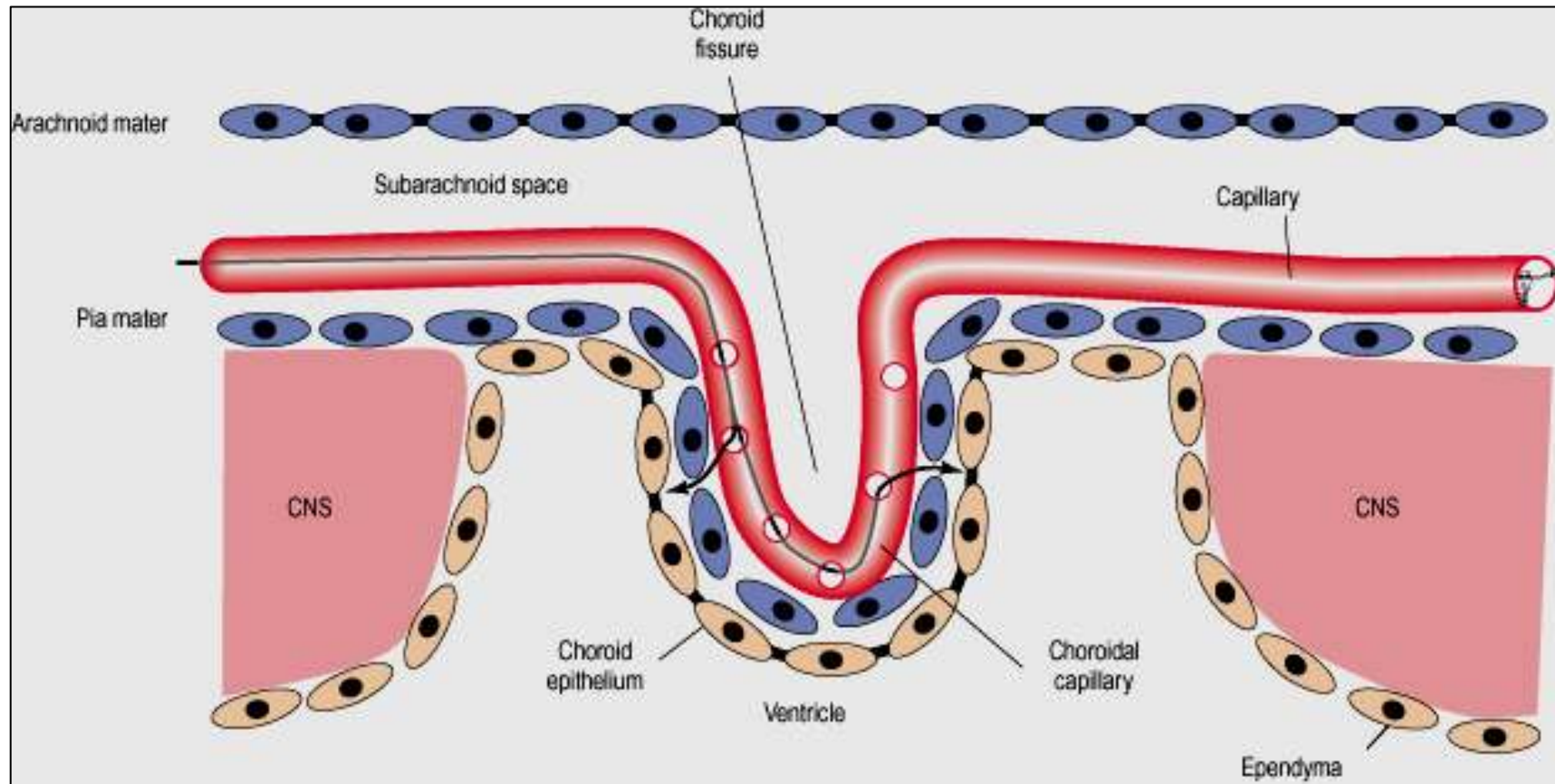
Recesses of 4th Ventricle



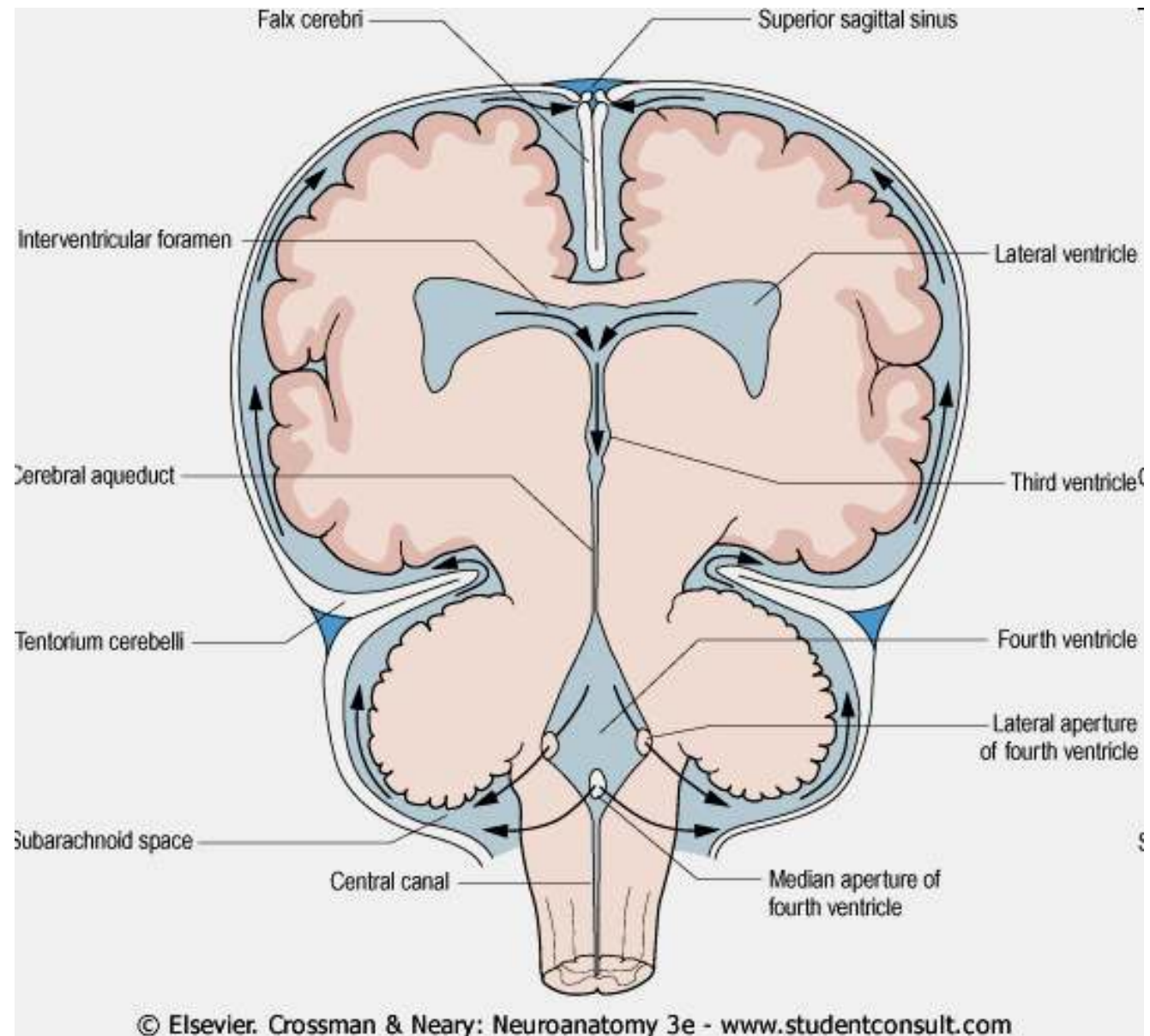
ela choroidea and choroid plexus



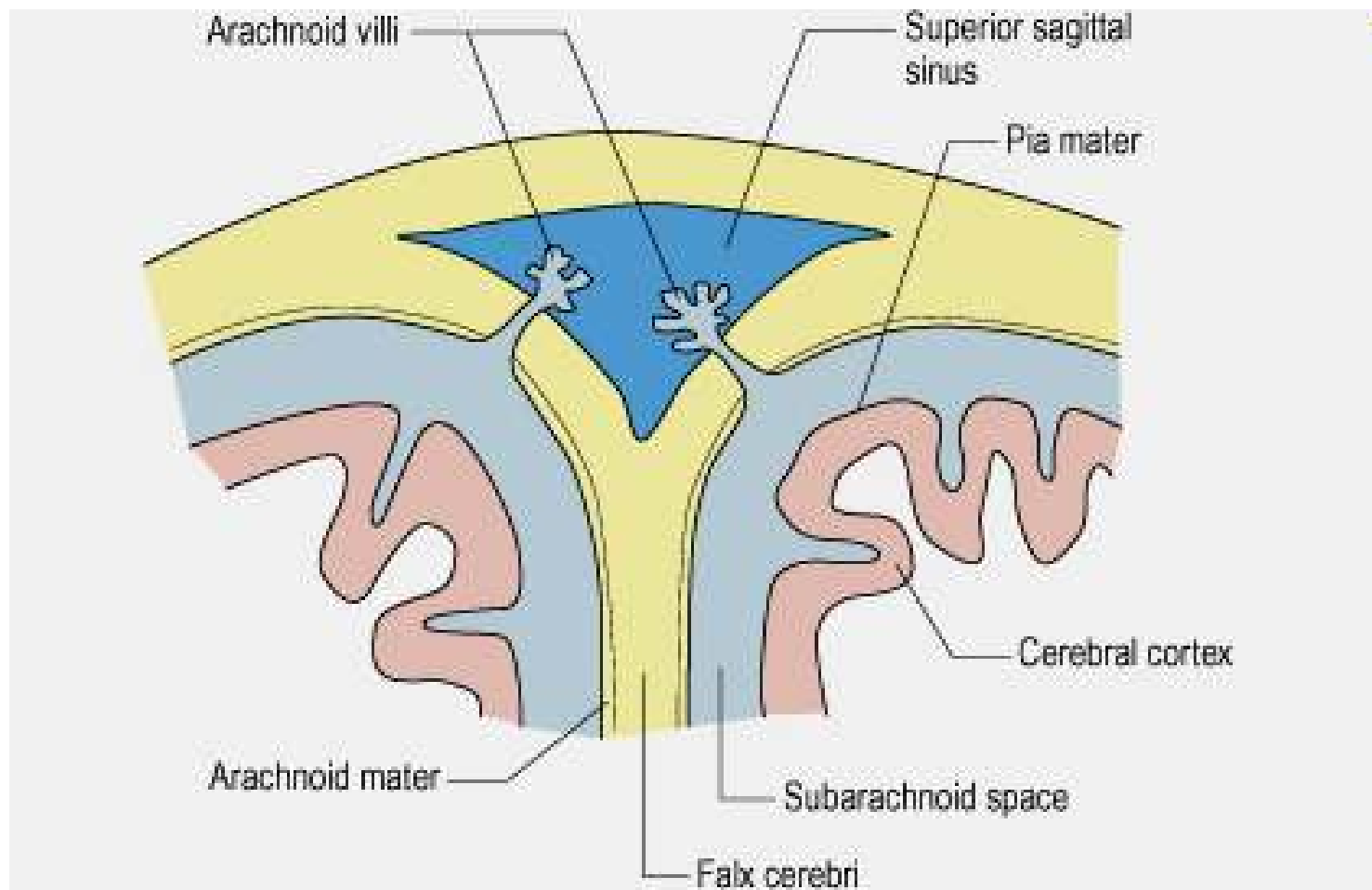
The arrangement of tissues forming the choroid plexus.



CSF

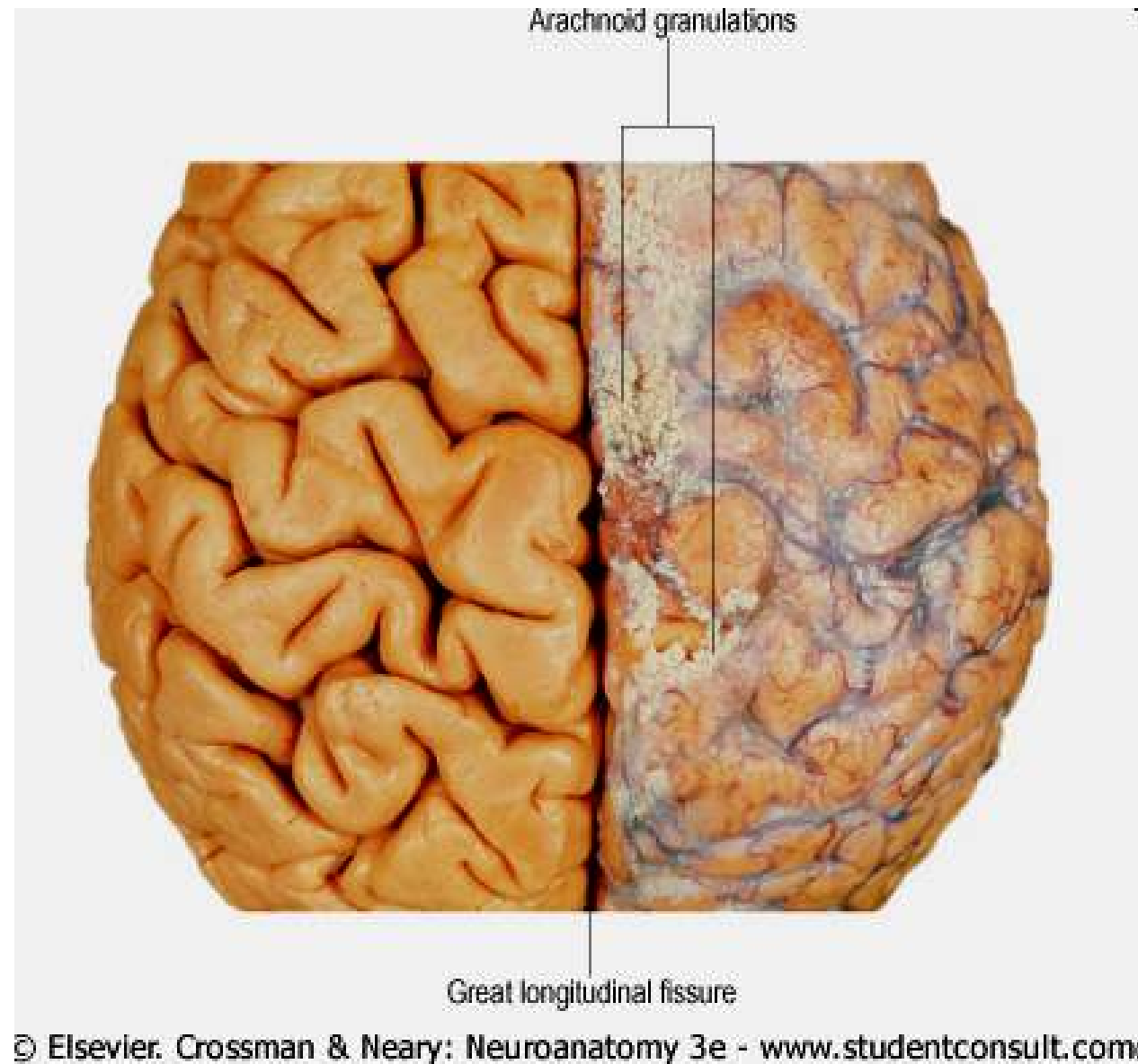


The cerebral ventricular system and its relationship with the subarachnoid space .The circulation of cerebrospinal fluid is indicated by arrows .



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Transverse section through the superior sagittal sinus showing arachnoid villi .



Superior aspect of the cerebral hemispheres showing arachnoid granulations on the right side .On the left side, the arachnoid mater has been removed .

Thanks



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